**What is claimed is:**

1. An active matrix organic light emitting display, comprising:

a substrate with a plurality of thin film transistors;

a dielectric layer formed over the substrate and the thin film transistors;

a first insulating layer formed over parts of the dielectric layer to define a predetermined transparent electrode area;

a transparent electrode formed over the predetermined transparent electrode area;

a second insulating layer formed on both sides of the transparent electrode to expose parts of surface of the transparent electrode;

an organic electroluminescent layer formed over the transparent electrode and the second insulating layer; and

a metal electrode formed over the organic electroluminescent layer.

2. The active matrix organic light emitting display according to claim 1, wherein the substrate is a glass substrate, a plastic substrate, or a ceramic substrate.

3. The active matrix organic light emitting display according to claim 2, wherein the plastic substrate is a transparent insulating material of polyethylene terephthalate, polyester, polycarbonates, polyacrylates, or polystyrene.

4. The active matrix organic light emitting display according to claim 1, wherein the thin film transistors are amorphous-silicon thin film transistors (a-Si:H TFTs), low temperature poly-silicon thin film transistors (LTPS-TFTs), or organic thin film transistors (OTFTs).

5. The active matrix organic light emitting display according to claim 1, wherein the dielectric layer is a layer of insulating oxide, nitride, carbide, or combinations thereof.

6. The active matrix organic light emitting display according to claim 1, wherein the dielectric layer is a layer of indium tin oxide (ITO), indium zinc oxide (IZO), aluminum zinc oxide (AZO), or zinc oxide (ZnO).

7. The active matrix organic light emitting display according to claim 1, wherein the organic electroluminescent layer is a layer of small molecule material, polymer, or organo-metallic complex.

8. A method of forming an active matrix organic light emitting display, comprising:

providing a substrate with a plurality of thin film transistors;

forming a dielectric layer over the substrate and the thin film transistors;

forming a first insulating layer over the dielectric layer;

etching through the first insulating layer with a photoresist layer as a mask to define the exposed surface of the dielectric layer as a predetermined transparent

electrode area;

forming a transparent electrode over the predetermined transparent electrode area;

forming a second insulating layer over both sides of the transparent electrode to expose parts of surface of the transparent electrode surface;

forming an organic electroluminescent layer over the transparent electrode and the second insulating layer; and

forming a metal electrode over the organic electroluminescent layer.

9. The method of forming an active matrix organic light emitting display according to claim 8, further comprising, before forming the first insulating layer, flattening the dielectric layer by chemical mechanical polishing.

10. The method of forming an active matrix organic light emitting display according to claim 8, wherein the substrate is a glass substrate, a plastic substrate, or a ceramic substrate.

11. The method of forming an active matrix organic light emitting display according to claim 10, wherein the plastic substrate is a transparent insulating material of polyethylene terephthalate, polyester, polycarbonates, polyacrylates, or polystyrene.

12. The active matrix organic light emitting display according to claim 8, wherein the thin film transistors are amorphous-silicon thin film transistors (a-Si:H TFTs), low

temperature poly-silicon thin film transistors (LTPS-TFTs), or organic thin film transistor (OTFTs).

13. The method of forming an active matrix organic light emitting display according to claim 8, wherein the dielectric layer is a layer of insulating oxide, nitride, carbide, or combinations thereof.

14. The method of forming an active matrix organic light emitting display according to claim 8, wherein the dielectric layer is a layer of indium tin oxide (ITO), indium zinc oxide (IZO), aluminum zinc oxide (AZO), or zinc oxide (ZnO).

15. The method of forming an active matrix organic light emitting display according to claim 8, wherein the organic electroluminescent layer is a layer of small molecule material, polymer, or organo-metallic complex.

16. The method of forming an active matrix organic light emitting display according to claim 8, wherein the transparent electrode is formed by sputtering, electron beam evaporation, thermal evaporation, or chemical vapor deposition.

17. The method of forming an active matrix organic light emitting display according to claim 8, wherein the dielectric layer is formed by sputtering, physical vapor deposition (PVD), or plasma enhance chemical vapor deposition (PECVD).

18. The method of forming an active matrix organic light emitting display according to claim 8, wherein the organic

electroluminescent layer is formed by thermal vacuum evaporation, spin coating, dip coating, roll-coating, injection-fill, embossing, stamping, physical vapor deposition, or chemical vapor deposition.